

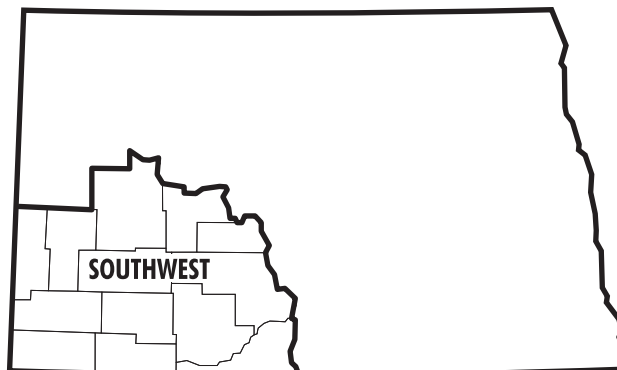
Farm Management Planning Guide



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Projected 2008 Crop Budgets South West North Dakota

Andrew Swenson, Farm Management Specialist
Ron Haugen, Farm Management Specialist



The 2008 crop budgets provide an estimate of revenues and costs for selected crops. Each set of budgets are developed for a multi-county region. There is considerable variation in soil type and productivity, weather conditions, as well as management and production practices within each region. Therefore, **THESE BUDGETS ARE ONLY INTENDED TO BE USED AS A GUIDE. EVERY INDIVIDUAL IS HIGHLY ENCOURAGED TO DEVELOP HIS/HER OWN BUDGETS!**

The profitability budget accounts for full economic opportunity costs for land and machinery investment, regardless of farm operator equity position. The bottom line is the return to labor and management. This is the expected “payment” to the producer for the labor and managerial efforts required by the crop

enterprise. Each individual must make the decision whether it is sufficient.

The budget can be changed to conform to the more common definition of accounting profit (return to unpaid labor and management, and owner equity) by replacing the machinery investment and land charge cost items with your per acre interest, or rental, expense of machinery and land, and real estate tax if land is owned, respectively.

The budget can be used for long run decisions if the revenues and costs are realistic for several years. (Crop prices, direct costs, and the land charge are best estimates for only the 2008 crop year, but crop yields are historic averages and machinery ownership costs are an average for the total length of ownership). If the budget shows a high return to labor and management, and is representative for several years, increased acreage and corresponding investment should be considered. However, if long-run returns to labor and management are unsatisfactory the best decision may be to exit the crop enterprise and employ the machinery and land investment, and labor and management, in a different enterprise or investment.

NDSU
Extension Service

North Dakota State University, Fargo, ND 58105

For short-run planning decisions you can omit the indirect costs if the land and machinery required to produce the different enterprises are in place. Simply compare the crop enterprises by calculating return over direct costs. Labor requirements and risk should also be considered. Insurance is not available for some crops.

The budget can be used to estimate cashflow by making a few modifications. Machinery depreciation should be omitted and the machinery investment number replaced with your per acre principal and interest payment on machinery debt. For owned land, the land charge should be replaced with your per acre real estate tax and principal and interest payment on land debt.

The 2002 farm bill has expired and a new farm bill had not yet passed at the time of this publication. Projected crop prices are higher than average and no government payments, coupled to 2008 production, are expected.

Primary Assumptions:

Crops are planted on dryland recrop ground. Costs of moving crop to local market/storage are included.

The budgets for the South West and North West regions represent production systems where soil disturbance only occurs at seeding.

Market Price: Best estimates of NDSU extension economists. The greater of projected market price and marketing loan rate is used.

Market Yields: Average yield for the 7 year period 2000-2006, after the low and high yield years are removed. Yields for safflower, yellow mustard, buckwheat, millet, rye, lentils and chickpeas are from NDSU extension agronomists and industry sources.

Fertilizer: Cost of fertilizer applied, based on soil test, to meet yield goal of 130% of market yield. N fertilizer can be reduced if previous crop was soybean, dry bean, field peas or lentil.

Soil test - recrop:
 Nitrogen - 40 lb
 Phosphorus - 12 ppm
 Potassium - 356 ppm

Fertilizer prices:

Nitrogen - .44/lb
 Phosphorus - .40/lb
 Potassium - .29/lb

Seed Prices:

Spring Wheat 11.25/bu
 Durum 19.50/bu
 Barley 8.50/bu
 Corn grain RR 1.60/thou.kern.
 Oil Sunflower .72/thou.kern.
 Conf. Sunflower 1.30/thou.kern.
 Flax 16.50/bu
 Canola 3.65/lb
 Oats 5.00/bu
 Field Peas 10.50/bu
 Millet .24/lb
 Buckwheat .33/lb
 Safflower .47/lb
 Lentils .34/lb
 Mustard .88/lb
 Large Chickpeas .65/lb
 Rye 4.50/bu
 Winter Wheat 10.00/bu

Fuel prices:

Diesel 2.90/gal
 Gas 3.10/gal

Lubrication charge: 15% of fuel cost

Crop Insurance: Coverage levels are 70% on all insurable crops. MPCCI estimates are used, except for RA-HPO on all wheat, soybeans and canola.

Miscellaneous: soil testing, machinery rent and custom work.

Operating Interest: Direct costs charged 7.50% interest for 6 month period.

Misc. Overhead: Machinery housing and insurance at .5% and .85%, respectively, of average machinery investment. Also, liability insurance and license fees of trucks. In addition, \$1 per acre is assumed for general farm utilities, farm publications, meetings, dues, income tax preparation, legal fees, etc.

Land charge = average cash rent.

Machinery investment: 4.5% real interest rate, over the years of machine ownership, is charged on average machinery investment. The real, or inflation adjusted, rate is the commercial rate minus the inflation rate. Ave. mach. investment = (Purchase price + Disposal price)/2

Depreciation = (Purchase price - disposal price / years ownership)

Spring Wheat

Durum

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	27	_____	30	_____
Market Price	5.99	_____	7.00	_____
MARKET INCOME	161.73	_____	210.00	_____
DIRECT COSTS				
-Seed	14.06	_____	29.25	_____
-Herbicides	14.95	_____	14.95	_____
-Fungicides*	5.00	_____	5.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	24.76	_____	29.47	_____
-Crop Insurance	9.90	_____	10.30	_____
-Fuel & Lubrication	11.09	_____	11.22	_____
-Repairs	9.34	_____	9.39	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	6.00	_____	6.00	_____
-Operating Interest	3.57	_____	4.33	_____
SUM OF LISTED DIRECT COSTS	98.67	=====	119.91	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.03	_____	3.07	_____
-Machinery Depreciation	11.28	_____	11.37	_____
-Machinery Investment	6.01	_____	6.05	_____
-Land Charge	27.50	_____	27.50	_____
SUM OF LISTED INDIRECT COSTS	47.81	=====	47.99	=====
SUM OF ALL LISTED COSTS	146.49	_____	167.90	_____
RETURN TO LABOR & MANAGEMENT	15.24	_____	42.10	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	3.65	_____	4.00	_____
-Indirect Costs	1.77	_____	1.60	_____
-Total Costs	5.43	_____	5.60	_____

notes:

*Seed treatment and early season foliar fungicide. Late season fungicide would cost about about \$6 or \$12 per acre, depending on product availability, plus application. Trials consistently show yield response of 15-20% with late application if weather favors disease development.

Malting Barley

Corn Grain

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	46	_____	58	_____
Market Price	5.02*	_____	3.37	_____
MARKET INCOME	230.92	_____	195.46	_____
DIRECT COSTS				
-Seed	10.63	_____	30.40*	_____
-Herbicides	14.35	_____	11.75	_____
-Fungicides	1.25	_____	0.00	_____
-Insecticides	0.00	_____	3.80**	_____
-Fertilizer	26.29	_____	27.40	_____
-Crop Insurance	4.60	_____	0.00***	_____
-Fuel & Lubrication	13.12	_____	13.94	_____
-Repairs	10.33	_____	11.55	_____
-Drying	0.00	_____	8.18	_____
-Miscellaneous	6.00	_____	6.00	_____
-Operating Interest	3.25	_____	4.24	_____
SUM OF LISTED DIRECT COSTS	89.81	=====	117.25	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.55	_____	4.24	_____
-Machinery Depreciation	12.95	_____	16.88	_____
-Machinery Investment	7.21	_____	9.29	_____
-Land Charge	27.50	_____	27.50	_____
SUM OF LISTED INDIRECT COSTS	51.21	=====	57.91	=====
SUM OF ALL LISTED COSTS	141.02	_____	175.16	_____
RETURN TO LABOR & MANAGEMENT	89.90	_____	20.30	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	1.95	_____	2.02	_____
-Indirect Costs	1.11	_____	1.00	_____
-Total Costs	3.07	_____	3.02	_____

Barley notes:

*Use \$3.49 estimate for feed barley price.

Corn notes:

*Roundup (glyphosate) resistant corn.

**Insecticide seed treatment for wireworm, rootworm, white grub and suppression of cutworm. Corn borer insecticide, foliar applied mid-season, would cost about \$6 plus application.

***Crop insurance only available by written agreement.

Oil Sunflower

Confectionery Sunflower

	Your Per Acre	Figures	Your Per Acre	Figures
Market Yield	1160		1130	
Market Price	0.193		0.252	
MARKET INCOME	223.88		284.76	
DIRECT COSTS				
-Seed	16.92		27.30	
-Herbicides	24.25		24.25	
-Fungicides	0.00		0.00	
-Insecticides*	12.00		18.00	
-Fertilizer	19.01		18.07	
-Crop Insurance	12.10		13.30	
-Fuel & Lubrication	11.81		11.77	
-Repairs	10.03		10.02	
-Drying	2.32		2.26	
-Miscellaneous	11.75		17.50	
-Operating Interest	4.51		5.34	
SUM OF LISTED DIRECT COSTS	124.71		147.81	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.49		3.48	
-Machinery Depreciation	13.35		13.32	
-Machinery Investment	7.30		7.28	
-Land Charge	27.50		27.50	
SUM OF LISTED INDIRECT COSTS	51.64		51.59	
SUM OF ALL LISTED COSTS	176.35		199.40	
RETURN TO LABOR & MANAGEMENT	47.53		85.36	
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.11		0.13	
-Indirect Costs	0.04		0.05	
-Total Costs	0.15		0.18	

Oil Sunflower notes:

*Includes seed treatment for control of wireworm and flea beetle, \$6, and one spraying for head feeding insects (red seed weevil, lygus bug and banded moths) at about \$6 per acre. Custom application cost of \$5.75 is under "Miscellaneous."

Confectionery Sunflower notes:

*Includes seed treatment for control of wireworm and flea beetle, \$6, and two sprayings for head feeding insects (red seed weevil, lygus bug and banded moths) at about \$6 per application. Each custom application cost of \$5.75 is under "Miscellaneous."

Canola

Flax

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1140	_____	17	_____
Market Price	0.198	_____	10.14	_____
MARKET INCOME	225.72	_____	172.38	_____
DIRECT COSTS				
-Seed	18.25	_____	9.90	_____
-Herbicides	21.75	_____	18.98	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	6.00*	_____	0.00	_____
-Fertilizer	35.78**	_____	14.17	_____
-Crop Insurance	13.20	_____	6.40	_____
-Fuel & Lubrication	12.05	_____	12.47	_____
-Repairs	9.96	_____	10.39	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	6.00	_____	6.00	_____
-Operating Interest	4.61	_____	2.94	_____
SUM OF LISTED DIRECT COSTS	127.60	=====	81.25	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.23	_____	3.34	_____
-Machinery Depreciation	12.20	_____	12.51	_____
-Machinery Investment	6.83	_____	7.31	_____
-Land Charge	27.50	_____	27.50	_____
SUM OF LISTED INDIRECT COSTS	49.76	=====	50.66	=====
SUM OF ALL LISTED COSTS	177.36	_____	131.91	_____
RETURN TO LABOR & MANAGEMENT	48.36	_____	40.47	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(bu):	
-Direct Costs	0.11	_____	4.78	_____
-Indirect Costs	0.04	_____	2.98	_____
-Total Costs	0.16	_____	7.76	_____

Canola notes:

*Insecticide seed treatment for flea beetles.

**Fertilizer cost includes 20 lbs sulfur.

Field Peas

Oats

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	29	_____	51	_____
Market Price	6.18*	_____	2.22	_____
MARKET INCOME	179.22	_____	113.22	_____
DIRECT COSTS				
-Seed	31.50	_____	10.00	_____
-Herbicides	21.75	_____	5.13	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	3.53	_____	24.35	_____
-Crop Insurance	5.90	_____	8.10	_____
-Fuel & Lubrication	12.85	_____	13.33	_____
-Repairs	10.97	_____	10.41	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	3.50	_____	6.00	_____
-Operating Interest	3.37	_____	2.90	_____
SUM OF LISTED DIRECT COSTS	93.37	=====	80.22	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.39	_____	3.62	_____
-Machinery Depreciation	13.51	_____	13.10	_____
-Machinery Investment	7.16	_____	7.29	_____
-Land Charge	27.50	_____	27.50	_____
SUM OF LISTED INDIRECT COSTS	51.56	=====	51.50	=====
SUM OF ALL LISTED COSTS	144.93	_____	131.72	_____
RETURN TO LABOR & MANAGEMENT	34.29	_____	(18.50)	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	3.22	_____	1.57	_____
-Indirect Costs	1.78	_____	1.01	_____
-Total Costs	5.00	_____	2.58	_____

Field Pea notes:

*Food quality price. Use \$4.50 price estimate for feed quality peas.

Lentils

Safflower

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1250		950	
Market Price	0.20		0.20	
MARKET INCOME	250.00		190.00	
DIRECT COSTS				
-Seed	23.80		11.75	
-Herbicides	21.25		15.25	
-Fungicides	0.00		0.10*	
-Insecticides	0.00		0.00	
-Fertilizer	2.54		12.83	
-Crop Insurance	10.60		11.50	
-Fuel & Lubrication	13.10		11.01	
-Repairs	11.08		9.31	
-Drying	0.00		0.00	
-Miscellaneous	6.00		6.00	
-Operating Interest	3.31		2.92	
SUM OF LISTED DIRECT COSTS	91.68		80.66	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.33		3.00	
-Machinery Depreciation	13.48		11.22	
-Machinery Investment	7.17		5.98	
-Land Charge	27.50		27.50	
SUM OF LISTED INDIRECT COSTS	51.48		47.70	
SUM OF ALL LISTED COSTS	143.15		128.36	
RETURN TO LABOR & MANAGEMENT	106.85		61.64	
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.07		0.08	
-Indirect Costs	0.04		0.05	
-Total Costs	0.11		0.14	

Safflower notes:

*Fungicide for alternaria leaf spot would cost \$17 plus application.

Yellow Mustard

Buckwheat

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	850	_____	850	_____
Market Price	0.264	_____	0.198	_____
MARKET INCOME	224.40	_____	168.30	_____
DIRECT COSTS				
-Seed	8.80	_____	16.50	_____
-Herbicides	12.25	_____	12.00	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	18.25	_____	7.67	_____
-Crop Insurance	6.30	_____	0.00	_____
-Fuel & Lubrication	11.80	_____	11.96	_____
-Repairs	9.87	_____	9.93	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	6.00	_____	1.50	_____
-Operating Interest	2.75	_____	2.23	_____
SUM OF LISTED DIRECT COSTS	76.01	=====	61.78	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.15	_____	3.20	_____
-Machinery Depreciation	12.00	_____	12.12	_____
-Machinery Investment	6.74	_____	6.79	_____
-Land Charge	27.50	_____	27.50	_____
SUM OF LISTED INDIRECT COSTS	49.39	=====	49.61	=====
SUM OF ALL LISTED COSTS	125.40	_____	111.39	_____
RETURN TO LABOR & MANAGEMENT	99.00	_____	56.91	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.09	_____	0.07	_____
-Indirect Costs	0.06	_____	0.06	_____
-Total Costs	0.15	_____	0.13	_____

notes:

Millet

Large Chickpeas

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1400	_____	1100	_____
Market Price	0.087	_____	0.27	_____
MARKET INCOME	121.80	_____	297.00	_____
DIRECT COSTS				
-Seed	6.00	_____	78.00	_____
-Herbicides	4.75	_____	21.25	_____
-Fungicides	0.00	_____	50.00*	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	13.27	_____	3.60	_____
-Crop Insurance	0.00	_____	10.80	_____
-Fuel & Lubrication	12.35	_____	14.02	_____
-Repairs	10.06	_____	12.49	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	6.00	_____	7.00	_____
-Operating Interest	1.97	_____	7.39	_____
SUM OF LISTED DIRECT COSTS	54.39	=====	204.56	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.32	_____	3.55	_____
-Machinery Depreciation	12.39	_____	14.56	_____
-Machinery Investment	6.93	_____	7.97	_____
-Land Charge	27.50	_____	27.50	_____
SUM OF LISTED INDIRECT COSTS	50.15	=====	53.57	=====
SUM OF ALL LISTED COSTS	104.54	_____	258.13	_____
RETURN TO LABOR & MANAGEMENT	17.26	_____	38.87	_____
LISTED COSTS PER BUDGET UNIT				
(lb):	(lb):		(lb):	
-Direct Costs	0.04	_____	0.19	_____
-Indirect Costs	0.04	_____	0.05	_____
-Total Costs	0.07	_____	0.23	_____

Large Chickpea notes:

*Three treatments of fungicide for ascochyta blight. More treatment may be necessary. Two different chemistries should be used for fungicide resistance management.

Winter Wheat

Rye

	Your Per Acre	Figures	Your Per Acre	Figures
Market Yield	34*	_____	34	_____
Market Price	5.50	_____	2.58	_____
MARKET INCOME	187.00	_____	87.72	_____
DIRECT COSTS				
-Seed	10.00	_____	5.40	_____
-Herbicides	10.70	_____	3.25	_____
-Fungicides	6.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	35.74	_____	35.74	_____
-Crop Insurance	9.90	_____	5.00	_____
-Fuel & Lubrication	10.89	_____	11.05	_____
-Repairs	9.01	_____	8.97	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	6.00	_____	6.00	_____
-Operating Interest	3.68	_____	2.83	_____
SUM OF LISTED DIRECT COSTS	101.93	=====	78.23	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	2.98	_____	3.04	_____
-Machinery Depreciation	10.97	_____	11.11	_____
-Machinery Investment	5.66	_____	5.84	_____
-Land Charge	27.50	_____	27.50	_____
SUM OF LISTED INDIRECT COSTS	47.11	=====	47.48	=====
SUM OF ALL LISTED COSTS	149.03	_____	125.71	_____
RETURN TO LABOR & MANAGEMENT	37.97	_____	(37.99)	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	3.00	_____	2.30	_____
-Indirect Costs	1.39	_____	1.40	_____
-Total Costs	4.38	_____	3.70	_____

Winter Wheat notes:

*Yield is per harvested acre, 2000-2006 acreage abandonment averaged 17%.

2008 Machinery List

Machine	Purch. Price	Annual Use	Years to trade	Trade in	Deprec.	Invest.	Repairs	Ac/hr
2WD 100HP Tractor	55500	400 hr	20	17877	4.70 /hr	4.13 /hr	5.65 /hr	
2WD 160HP Tractor	91300	500 hr	15	27021	8.57 /hr	5.32 /hr	9.30 /hr	
4WD 280HP Tractor	125700	500 hr	15	37199	11.80 /hr	7.33 /hr	7.31 /hr	
SP Combine (base unit)	160200	250 hr	12	39855	40.12 /hr	18.00 /hr	26.01 /hr	
Tandem Truck (used)	31000	150 hr	15	10300	9.20 /hr	6.20 /hr	5.73 /hr	
Semi & Trailer (used)	36000	150 hr	10	10300	17.13 /hr	6.95 /hr	7.13 /hr	
Pick-up Truck	20900	300 hr	10	4300	5.53 /hr	1.89 /hr	2.67 /hr	
Swather 25 ft	17500	1000 ac	20	4150	0.67 /ac	0.49 /ac	0.31 /ac	12.1
Sprayer 90 ft	27200	5000 ac	10	13529	0.27 /ac	0.18 /ac	0.35 /ac	42.5
Heavy Harrow 70 ft	23100	2000 ac	20	13512	0.24 /ac	0.41 /ac	0.26 /ac	39.7
Air Seeder 35 ft	81200	2200 ac	10	41500	1.80 /ac	1.25 /ac	3.22 /ac	14.8
Planter 12-30	40800	800 ac	20	13586	1.70 /ac	1.53 /ac	2.26 /ac	10.6
Corn head 6-30	25600	400 ac	20	2532	2.90 /ac	1.59 /ac	0.71 /ac	5.7
Grain head w/pu	11200	800 ac	15	2333	0.74 /ac	0.38 /ac	0.21 /ac	8.5
Grain str. cut 25 ft	15100	1600 ac	8	6058	0.71 /ac	0.30 /ac	0.28 /ac	8.5
Head w/sunf pans 25 ft	18800	400 ac	20	1983	2.10 /ac	1.17 /ac	0.35 /ac	8.5
Rock picker	16000	50 hr	20	5103	0.36 /ac	0.32 /ac	0.24 /ac	29.1
Grain auger	6900	50 hr	20	530	6.37 /hr	3.34 /hr	0.68 /hr	

Example Sequence of Operations

Field operations sequence for spring wheat and durum

OP. NO.	DESCRIPTION	(FEET) WIDTH	(MPH) SPEED	(AC/HR) Fld Cap	(\$/AC) FUEL & LUBE	(\$/AC) EST. REPAIRS
1	Pick Rocks				0.50	0.43
2	Spray (burn-down)	90	6.0	42.5	0.34	0.48
3	Plant	35	5.0	14.8	2.77	3.71
4	Spray	90	6.0	42.5	0.34	0.48
5	Combine str. cut	25	4.0	8.5	3.98	3.34
	Trucks*				1.16	0.41
	Grain auger (pto)				0.20	0.01
	Pickup truck allocation				1.80	0.48
	Total				11.09	9.34

* Truck costs will vary between crops.

For more information on this and other topics, see: www.ag.ndsu.edu